From: Glinda Cooper
To: greta.smedje@medsci.uu.se
Subject: Follow-up on formaldehyde - allergy - asthma study
Date: 03/15/2012 02:30 PM
Attachments: Smedje_IntJTuberculLungDis_2001.pdf
Smedje_ClinExperAllergy_1997.pdf

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Dear Dr. Smedje:

I am an epidemiologist with the U.S. Environmental Protection Agency, and I am preparing a summary of the relevant studies pertaining to formaldehyde exposure and allergic response/asthma as part of a health assessment we are conducting for this chemical.

I have reviewed your 1997 and 2001 papers on the asthma/allergy incidence study you conducted using measurements taken in schools (see attached pdfs), and had some questions I was hoping you could help me with.

The baseline study (1997 paper) used the 1993 formaldehyde measurements, and the incidence study used the 1993 and 1995 measurement. In the 1993 data, about 2/3 of the measures were less than the detection limit, and the total range was relatively small (< 5 to 10 g/m^3). In the 2001 paper, it also looks like a large proportion of the combined formaldehyde measures were less than the detection limit (geometric mean = 4 g/m^3), but there is a wider range of exposures (up to 72 g/m^3).

1) Can you tell me what proportion in the 2001 paper was less than the detection limit, and how these were treated in the analysis (i.e., were they dropped as "missing" values, or were they set as a value of ½ the detection limit, or some other value)? Can you tell me anything more about the distribution of values that were above the detection limit (i.e., what is the mean and median among those that were greater than the LOD)?
2) I am trying to get a better sense of how the distribution of exposure could be affecting the linear regression analysis you conducted. Is it possible to look at a 3-level variable (e.g., < detection limit, 5 – 35 (or whatever the median is among those that are above the LOD, and 35 – 72) to get a sense of risk at the lower levels of exposure?

I appreciate any assistance you can provide about these questions (but I certainly understand the difficulties in going back to data sets completed so many years ago).

Sincerely,

Glinda Cooper

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